TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

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ANALYTICAL REPORT

CHECKED FOR COMPLETENESS OF PARAMETERS ORDERED BY:
10/8/10

Job Number: 360-29918-1

Job Description: Olin Chemical Groundwater

For:
Olin Corporation
3855 North Ocoee Street
Suite 200
Cleveland, TN 37312-4441

Attention: Mr. Steven Morrow

Approved for release.
James T Wickham
Technology Manager
9/22/2010 1:52 PM

Designee for
Becky C Mason
Project Manager II
becky.mason@testamericainc.com
09/22/2010

Results relate only to the items tested and the sample(s) as received by the laboratory. The test results in this report meet all NELAC requirements for accredited parameters, exceptions are noted in this report. Pursuant to NELAC, this report may not be reproduced except in full, and with written approval from the laboratory. TestAmerica Westfield Certifications and Approvals: MADEP MA014, RIDOH57, CTDPH 0494, VT DECWSD, NH DES 2539, NELAP FL E87912 TOX, NELAP NJ MA008 TOX, NELAP NY 10843, NY ELAP 10843, North Carolina 647, NELAP PA 68-04386. Field sampling is performed under SOPs WE-FLD-001 and WE-FLD-002.

TestAmerica Laboratories, Inc.
TestAmerica Westfield Westfield Executive Park, 53 Southampton Road, Westfield, MA 01085
Tel (413) 572-4000 Fax (413) 572-3707 www.testamericainc.com

ACCREDITED IN ACCORDANCE WITH nelac

Table of Contents

MassDEP Analytical Protocol Certification Form

Laboratory Name: **TestAmerica Westfield** Project #: **360-29918-1**

Project Location: **Olin Chemical Groundwater** RTN:

This form provides certifications for the following data set: list Laboratory Sample ID Number(s)):

360-29918-[1-9]

Matrices: [X] Groundwater/Surface Water [ ] Soil/Sediment [ ] Drinking Water [ ] Air [ ] other:

CAM Protocols (check all that apply below):

8260 VOC CAM II A [ ]	7470/7471 Hg CAM III B [ ]	Mass DEP VPH CAM IV A [ ]	8081 Pesticides CAM V B [ ]	7196 Hex Cr CAM VI B [ ]	Mass DEP APH CAM IX A [ ]
8270 SVOC CAM II B [ ]	7010 Metals CAM III C [ ]	Mass DEP EPH CAM IV B [ ]	8151 Herbicides CAM V C [ ]	8330 Explosives CAM VIII A [ ]	TO-15 VOC CAM IX B [ ]
6010 Metals CAM III A [X]	6020 Metals CAM III D [ ]	8082 PCB CAM V A [ ]	9014 Total Cyanide/PAC CAM VI A [ ]	332.0 Perchlorate CAM VIII B [ ]	

Affirmative Responses to Questions A through F are required for "Presumptive Certainty" status

A	Were all samples received in a condition consistent with those described on the Chain-of-Custody, properly preserved (including temperature) in the field or laboratory, and prepared/analyzed within method holding time.	[X] Yes [ ] No
B	Were the analytical method(s) and all associated QC requirements specified in the selected CAM protocol(s) followed?	[X] Yes [ ] No
C	Were all required corrective actions and analytical response actions specified in the selected CAM protocol(s) implemented for all identified performance standard non-conformances?	[X] Yes [ ] No
D	Does the laboratory report comply with all the reporting requirements specified in CAM VII A, "Quality Assurance and Quality Control Guidelines for the Acquisition and Reporting of Analytical Data"?	[X] Yes [ ] No
E	a. VPH, EPH and APH Methods only: Was each method conducted without significant modification(s)? (Refer to the individual method(s) for a list of significant modifications). b. APH and TO-15 Methods only: Was the complete analyte list reported for each method?	[ ] Yes [ ] No [ ] Yes [ ] No
F	Were all applicable CAM protocol QC and performance standard non-conformances identified and evaluated in a laboratory narrative (including all "No" responses to Questions A through E)?	[X] Yes [ ] No

Responses to Questions G, H and I below are required for "Presumptive Certainty" status

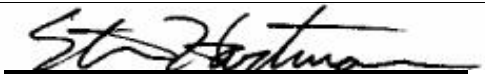
G	Were the reporting limits at or below all CAM reporting limits specified in the selected CAM protocol(s)?	[X] Yes [ ] No[1]

***Data User Note:* Data that achieve "Presumptive Certainty" status may not necessarily meet the data usability and representativeness requirements described in 310 CMR 40. 1056 (2)(k) and WCS-07-350**

H	Were **all** QC performance standards specified in the CAM protocol(s) achieved?	[X] Yes [ ] No
I	Were results reported for the complete analyte list specified in the selected CAM protocol(s) ?	[ ] Yes [X] No

[1] All negative responses must be addressed in an attached laboratory narrative.

I, the undersigned, attest under the pains and penalties of perjury that, based upon my personal inquiry of those responsible for obtaining the information, the material contained in this analytical report is, to the best of my knowledge and belief, is accurate and complete.

Signature:  Position: Laboratory Director

Printed Name: Steven C. Hartmann Date: 9/22/10 12:54

CASE NARRATIVE

Client: Olin Corporation

Project: Olin Chemical Groundwater

Report Number: 360-29918-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 09/01/2010; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.0, 9.0 C.

Note: All samples which require thermal preservation are considered acceptable if the arrival temperature is within 2 C of the required temperature or method specified range. For samples with a specified temperature of 4 C, samples with a temperature ranging from just above freezing temperature of water to 6 C shall be acceptable. Samples that are hand delivered immediately following collection may not meet these criteria, however they will be deemed acceptable according to NELAC standards, if there is evidence that the chilling process has begun, such as arrival on ice, etc.

DISSOLVED METALS

Samples OC-GW 79S (360-29918-1), OC-GW 202D (360-29918-2), OC-GW 202S (360-29918-3), OC-GW 202S DUP (360-29918-4), OC-PZ 18R (360-29918-5), OC-PZ 16RR (360-29918-6), OC-PZ 17RR (360-29918-7), OC-GW 78S (360-29918-8) and OC-GW 25 (360-29918-9) were analyzed for dissolved metals in accordance with EPA SW-846 Method 6010B. The samples were analyzed on 09/08/2010.

General method information:

At the request of the client, an abbreviated/modified MCP analyte list was reported for this job.

No difficulties were encountered during the dissolved metals analyses.

All quality control parameters were within the acceptance limits.

SPECIFIC CONDUCTIVITY

Samples OC-GW 79S (360-29918-1), OC-GW 202D (360-29918-2), OC-GW 202S (360-29918-3), OC-GW 202S DUP (360-29918-4), OC-PZ 18R (360-29918-5), OC-PZ 16RR (360-29918-6), OC-PZ 17RR (360-29918-7), OC-GW 78S (360-29918-8) and OC-GW 25 (360-29918-9) were analyzed for specific conductivity in accordance with SM20 2510B. The samples were analyzed on 09/08/2010.

General method information:

Samples OC-GW 79S (360-29918-1)[10X], OC-GW 202D (360-29918-2)[10X] and OC-PZ 16RR (360-29918-6)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the conductivity analyses.

All quality control parameters were within the acceptance limits.

ANIONS

Samples OC-GW 79S (360-29918-1), OC-GW 202D (360-29918-2), OC-GW 202S (360-29918-3), OC-GW 202S DUP (360-29918-4), OC-PZ 18R (360-29918-5), OC-PZ 16RR (360-29918-6), OC-PZ 17RR (360-29918-7), OC-GW 78S (360-29918-8) and OC-GW 25 (360-29918-9) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 09/08/2010, 09/09/2010 and 09/16/2010.

General method information:

Samples OC-GW 79S (360-29918-1)[10X], OC-GW 202D (360-29918-2)[10X], OC-GW 202D (360-29918-2)[20X], OC-GW 202S (360-29918-3)[10X], OC-GW 202S DUP (360-29918-4)[10X], OC-PZ 18R (360-29918-5)[10X], OC-PZ 16RR (360-29918-6)[10X], OC-PZ 17RR (360-29918-7)[10X], OC-GW 78S (360-29918-8)[10X] and OC-GW 25 (360-29918-9)[10X] required dilution prior to analysis. The

reporting limits have been adjusted accordingly.

No difficulties were encountered during the anions analyses.

All quality control parameters were within the acceptance limits.

AMMONIA

Samples OC-GW 79S (360-29918-1), OC-GW 202D (360-29918-2), OC-GW 202S (360-29918-3), OC-GW 202S DUP (360-29918-4), OC-PZ 18R (360-29918-5), OC-PZ 16RR (360-29918-6), OC-PZ 17RR (360-29918-7), OC-GW 78S (360-29918-8) and OC-GW 25 (360-29918-9) were analyzed for ammonia in accordance with Lachat 107-06-1B. The samples were prepared on 09/02/2010 and 09/03/2010 and analyzed on 09/03/2010, 09/09/2010 and 09/21/2010.

Ammonia failed the recovery criteria low for the MS/MSD of sample OC-PZ 17RRMS (360-29918-7) in batch 360-62812.The presence of the '4' qualifier in the report indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount. Refer to the QC report for details.

General method information:

Samples OC-GW 79S (360-29918-1)[10X], OC-GW 202D (360-29918-2)[50X], OC-GW 202S (360-29918-3)[10X], OC-GW 202S DUP (360-29918-4)[10X], OC-PZ 18R (360-29918-5)[10X], OC-PZ 16RR (360-29918-6)[10X], OC-PZ 17RR (360-29918-7)[10X], OC-GW 78S (360-29918-8)[10X] and OC-GW 25 (360-29918-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the ammonia analyses.

All other quality control parameters were within the acceptance limits.

EXECUTIVE SUMMARY - Detections

Client: Olin Corporation Job Number: 360-29918-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
360-29918-1	**OC-GW 79S**				
Sulfate		830	20	mg/L	300.0
Chloride		200	10	mg/L	300.0
Ammonia		120	1.0	mg/L	L107-06-1B
Specific Conductance		2700	10	umhos/cm	SM 2510B
Dissolved					
Chromium		23	5.0	ug/L	6010B
360-29918-2	**OC-GW 202D**				
Sulfate		1900	40	mg/L	300.0
Chloride		230	10	mg/L	300.0
Ammonia		240	5.0	mg/L	L107-06-1B
Specific Conductance		4700	10	umhos/cm	SM 2510B
Dissolved					
Aluminum		13000	100	ug/L	6010B
Chromium		1000	5.0	ug/L	6010B
360-29918-3	**OC-GW 202S**				
Sulfate		490	20	mg/L	300.0
Chloride		65	10	mg/L	300.0
Ammonia		70	1.0	mg/L	L107-06-1B
Specific Conductance		1300	1.0	umhos/cm	SM 2510B
Dissolved					
Chromium		5.3	5.0	ug/L	6010B
360-29918-4	**OC-GW 202S DUP**				
Sulfate		490	20	mg/L	300.0
Chloride		66	10	mg/L	300.0
Ammonia		62	1.0	mg/L	L107-06-1B
Specific Conductance		1300	1.0	umhos/cm	SM 2510B
Dissolved					
Chromium		5.7	5.0	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: Olin Corporation Job Number: 360-29918-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
360-29918-5	**OC-PZ 18R**					
Sulfate		170		20	mg/L	300.0
Chloride		190		10	mg/L	300.0
Ammonia		52		1.0	mg/L	L107-06-1B
Specific Conductance		1200		1.0	umhos/cm	SM 2510B
Dissolved						
Chromium		12		5.0	ug/L	6010B
360-29918-6	**OC-PZ 16RR**					
Sulfate		520		20	mg/L	300.0
Chloride		250		10	mg/L	300.0
Ammonia		100		1.0	mg/L	L107-06-1B
Specific Conductance		2300		10	umhos/cm	SM 2510B
Dissolved						
Chromium		2.1	J	5.0	ug/L	6010B
360-29918-7	**OC-PZ 17RR**					
Sulfate		510		20	mg/L	300.0
Chloride		20		10	mg/L	300.0
Ammonia		59		1.0	mg/L	L107-06-1B
Specific Conductance		1300		1.0	umhos/cm	SM 2510B
Dissolved						
Chromium		4.4	J	5.0	ug/L	6010B
360-29918-8	**OC-GW 78S**					
Sulfate		590		20	mg/L	300.0
Chloride		24		10	mg/L	300.0
Ammonia		41		1.0	mg/L	L107-06-1B
Specific Conductance		1300		1.0	umhos/cm	SM 2510B
Dissolved						
Chromium		2.5	J	5.0	ug/L	6010B

EXECUTIVE SUMMARY - Detections

Client: Olin Corporation Job Number: 360-29918-1

Lab Sample ID / Analyte	Client Sample ID	Result / Qualifier		Reporting Limit	Units	Method
360-29918-9	**OC-GW 25**					
Sulfate		100		20	mg/L	300.0
Chloride		100		10	mg/L	300.0
Ammonia		44		0.50	mg/L	L107-06-1B
Specific Conductance		720		1.0	umhos/cm	SM 2510B
Dissolved						
Chromium		2.5	J	5.0	ug/L	6010B

METHOD SUMMARY

Client: Olin Corporation Job Number: 360-29918-1

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Dissolved Metals	TAL WFD	SW846 6010B	
Sample Filtration, Field	TAL WFD		FIELD_FLTRD
Chloride & Sulfate	TAL WFD	40CFR136A 300.0	
Nitrogen Ammonia	TAL WFD	LACHAT L107-06-1B	
Distillation, Ammonia	TAL WFD		Distill/Ammonia
Conductivity, Specific Conductance	TAL WFD	SM SM 2510B	

Lab References:

TAL WFD = TestAmerica Westfield

Method References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

LACHAT = LACHAT

SM = "Standard Methods For The Examination Of Water And Wastewater",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Olin Corporation

Job Number: 360-29918-1

Method	Analyst	Analyst ID
SW846 6010B	Smith, Tim J	TJS
40CFR136A 300.0	Emerich, Rich W	RWE
40CFR136A 300.0	Hartmann, Steve	SH
40CFR136A 300.0	Smith, Tim J	TJS
LACHAT L107-06-1B	Emerich, Rich W	RWE
SM SM 2510B	Emerich, Rich W	RWE
SM SM 2510B	Stewart, Alyse M	AMS

SAMPLE SUMMARY

Client: Olin Corporation

Job Number: 360-29918-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
360-29918-1	OC-GW 79S	Water	08/30/2010 1335	09/01/2010 1700
360-29918-2	OC-GW 202D	Water	08/31/2010 0905	09/01/2010 1700
360-29918-3	OC-GW 202S	Water	08/31/2010 0955	09/01/2010 1700
360-29918-4	OC-GW 202S DUP	Water	08/31/2010 1000	09/01/2010 1700
360-29918-5	OC-PZ 18R	Water	08/31/2010 1130	09/01/2010 1700
360-29918-6	OC-PZ 16RR	Water	08/31/2010 1325	09/01/2010 1700
360-29918-7	OC-PZ 17RR	Water	09/01/2010 1000	09/01/2010 1700
360-29918-8	OC-GW 78S	Water	09/01/2010 1135	09/01/2010 1700
360-29918-9	OC-GW 25	Water	09/01/2010 0845	09/01/2010 1700

SAMPLE RESULTS

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-GW 79S**

Lab Sample ID: 360-29918-1
Client Matrix: Water

Date Sampled: 08/30/2010 1335
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896		Instrument ID:	Varian ICP
Preparation:	N/A			Lab File ID:	090810a.csv
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	09/08/2010 1128			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	23		1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-GW 202D**

Lab Sample ID: 360-29918-2
Client Matrix: Water

Date Sampled: 08/31/2010 0905
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896		Instrument ID:	Varian ICP
Preparation:	N/A			Lab File ID:	090810a.csv
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	09/08/2010 1139			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	13000		15	100
Chromium	1000		1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-GW 202S**

Lab Sample ID: 360-29918-3
Client Matrix: Water

Date Sampled: 08/31/2010 0955
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896		Instrument ID:	Varian ICP
Preparation:	N/A			Lab File ID:	090810a.csv
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	09/08/2010 1149			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	5.3		1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-GW 202S DUP**

Lab Sample ID: 360-29918-4
Client Matrix: Water

Date Sampled: 08/31/2010 1000
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896	Instrument ID: Varian ICP
Preparation:	N/A		Lab File ID: 090810a.csv
Dilution:	1.0		Initial Weight/Volume:
Date Analyzed:	09/08/2010 1152		Final Weight/Volume: 1.0 mL
Date Prepared:			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	5.7		1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-PZ 18R**

Lab Sample ID: 360-29918-5
Client Matrix: Water

Date Sampled: 08/31/2010 1130
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896		Instrument ID:	Varian ICP
Preparation:	N/A			Lab File ID:	090810a.csv
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	09/08/2010 1155			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	12		1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-PZ 16RR**

Lab Sample ID: 360-29918-6
Client Matrix: Water

Date Sampled: 08/31/2010 1325
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896		Instrument ID:	Varian ICP
Preparation:	N/A			Lab File ID:	090810a.csv
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	09/08/2010 1157			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	2.1	J	1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-PZ 17RR**

Lab Sample ID: 360-29918-7
Client Matrix: Water

Date Sampled: 09/01/2010 1000
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896		Instrument ID:	Varian ICP
Preparation:	N/A			Lab File ID:	090810a.csv
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	09/08/2010 1200			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	4.4	J	1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-GW 78S**

Lab Sample ID: 360-29918-8
Client Matrix: Water

Date Sampled: 09/01/2010 1135
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896		Instrument ID:	Varian ICP
Preparation:	N/A			Lab File ID:	090810a.csv
Dilution:	1.0			Initial Weight/Volume:	
Date Analyzed:	09/08/2010 1203			Final Weight/Volume:	1.0 mL
Date Prepared:					

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	2.5	J	1.0	5.0

Client: Olin Corporation

Job Number: 360-29918-1

Client Sample ID: **OC-GW 25**

Lab Sample ID: 360-29918-9
Client Matrix: Water

Date Sampled: 09/01/2010 0845
Date Received: 09/01/2010 1700

6010B Dissolved Metals-Dissolved

Method:	6010B	Analysis Batch: 360-62896	Instrument ID: Varian ICP
Preparation:	N/A		Lab File ID: 090810a.csv
Dilution:	1.0		Initial Weight/Volume:
Date Analyzed:	09/08/2010 1206		Final Weight/Volume: 1.0 mL
Date Prepared:			

Analyte	Result (ug/L)	Qualifier	MDL	RL
Aluminum	ND		15	100
Chromium	2.5	J	1.0	5.0

General Chemistry

Client Sample ID: **OC-GW 79S**

Lab Sample ID: 360-29918-1 Date Sampled: 08/30/2010 1335
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	830		mg/L	20	20	10	300.0
Analysis Batch: 360-63181	Date Analyzed: 09/08/2010 2104						
Chloride	200		mg/L	10	10	10	300.0
Analysis Batch: 360-63181	Date Analyzed: 09/08/2010 2104						
Ammonia	120		mg/L	1.0	1.0	10	L107-06-1B
Analysis Batch: 360-62809	Date Analyzed: 09/03/2010 1447						
Prep Batch: 360-62759	Date Prepared: 09/02/2010 1500						
Specific Conductance	2700		umhos/cm	10	10	10	SM 2510B
Analysis Batch: 360-62942	Date Analyzed: 09/08/2010 1705						

General Chemistry

Client Sample ID: **OC-GW 202D**

Lab Sample ID: 360-29918-2 Date Sampled: 08/31/2010 0905
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	1900		mg/L	40	40	20	300.0
Analysis Batch: 360-63326	Date Analyzed: 09/16/2010 2259						
Chloride	230		mg/L	10	10	10	300.0
Analysis Batch: 360-63181	Date Analyzed: 09/08/2010 2120						
Ammonia	240		mg/L	5.0	5.0	50	L107-06-1B
Analysis Batch: 360-63048	Date Analyzed: 09/09/2010 1403						
Prep Batch: 360-62759	Date Prepared: 09/02/2010 1500						
Specific Conductance	4700		umhos/cm	10	10	10	SM 2510B
Analysis Batch: 360-62942	Date Analyzed: 09/08/2010 1707						

General Chemistry

Client Sample ID: **OC-GW 202S**

Lab Sample ID: 360-29918-3 Date Sampled: 08/31/2010 0955
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	490		mg/L	20	20	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2235						
Chloride	65		mg/L	10	10	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2235						
Ammonia	70		mg/L	1.0	1.0	10	L107-06-1B
Analysis Batch: 360-62809	Date Analyzed: 09/03/2010 1449						
Prep Batch: 360-62759	Date Prepared: 09/02/2010 1500						
Specific Conductance	1300		umhos/cm	1.0	1.0	1.0	SM 2510B
Analysis Batch: 360-62904	Date Analyzed: 09/08/2010 1517						

General Chemistry

Client Sample ID: **OC-GW 202S DUP**

Lab Sample ID: 360-29918-4 Date Sampled: 08/31/2010 1000
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	490		mg/L	20	20	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2250						
Chloride	66		mg/L	10	10	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2250						
Ammonia	62		mg/L	1.0	1.0	10	L107-06-1B
Analysis Batch: 360-62809	Date Analyzed: 09/03/2010 1450						
Prep Batch: 360-62759	Date Prepared: 09/02/2010 1500						
Specific Conductance	1300		umhos/cm	1.0	1.0	1.0	SM 2510B
Analysis Batch: 360-62904	Date Analyzed: 09/08/2010 1521						

General Chemistry

Client Sample ID: **OC-PZ 18R**

Lab Sample ID: 360-29918-5 Date Sampled: 08/31/2010 1130
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	170		mg/L	20	20	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2305						
Chloride	190		mg/L	10	10	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2305						
Ammonia	52		mg/L	1.0	1.0	10	L107-06-1B
Analysis Batch: 360-62809	Date Analyzed: 09/03/2010 1451						
Prep Batch: 360-62759	Date Prepared: 09/02/2010 1500						
Specific Conductance	1200		umhos/cm	1.0	1.0	1.0	SM 2510B
Analysis Batch: 360-62904	Date Analyzed: 09/08/2010 1523						

General Chemistry

Client Sample ID: **OC-PZ 16RR**

Lab Sample ID: 360-29918-6 Date Sampled: 08/31/2010 1325
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	520		mg/L	20	20	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2320						
Chloride	250		mg/L	10	10	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2320						
Ammonia	100		mg/L	1.0	1.0	10	L107-06-1B
Analysis Batch: 360-62809	Date Analyzed: 09/03/2010 1454						
Prep Batch: 360-62759	Date Prepared: 09/02/2010 1500						
Specific Conductance	2300		umhos/cm	10	10	10	SM 2510B
Analysis Batch: 360-62942	Date Analyzed: 09/08/2010 1708						

General Chemistry

Client Sample ID: **OC-PZ 17RR**

Lab Sample ID: 360-29918-7 Date Sampled: 09/01/2010 1000
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	510		mg/L	20	20	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2335						
Chloride	20		mg/L	10	10	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2335						
Ammonia	59		mg/L	1.0	1.0	10	L107-06-1B
Analysis Batch: 360-62812	Date Analyzed: 09/03/2010 1459						
Prep Batch: 360-62783	Date Prepared: 09/03/2010 1039						
Specific Conductance	1300		umhos/cm	1.0	1.0	1.0	SM 2510B
Analysis Batch: 360-62904	Date Analyzed: 09/08/2010 1526						

General Chemistry

Client Sample ID: **OC-GW 78S**

Lab Sample ID: 360-29918-8 Date Sampled: 09/01/2010 1135
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	590		mg/L	20	20	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2351						
Chloride	24		mg/L	10	10	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/08/2010 2351						
Ammonia	41		mg/L	1.0	1.0	10	L107-06-1B
Analysis Batch: 360-62812	Date Analyzed: 09/03/2010 1502						
Prep Batch: 360-62783	Date Prepared: 09/03/2010 1039						
Specific Conductance	1300		umhos/cm	1.0	1.0	1.0	SM 2510B
Analysis Batch: 360-62904	Date Analyzed: 09/08/2010 1527						

General Chemistry

Client Sample ID: **OC-GW 25**

Lab Sample ID: 360-29918-9 Date Sampled: 09/01/2010 0845
Client Matrix: Water Date Received: 09/01/2010 1700

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Sulfate	100		mg/L	20	20	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/09/2010 0006						
Chloride	100		mg/L	10	10	10	300.0
Analysis Batch: 360-63190	Date Analyzed: 09/09/2010 0006						
Ammonia	44		mg/L	0.50	0.50	5.0	L107-06-1B
Analysis Batch: 360-63430	Date Analyzed: 09/21/2010 1438						
Prep Batch: 360-62783	Date Prepared: 09/03/2010 1039						
Specific Conductance	720		umhos/cm	1.0	1.0	1.0	SM 2510B
Analysis Batch: 360-62904	Date Analyzed: 09/08/2010 1529						

DATA REPORTING QUALIFIERS

Client: Olin Corporation Job Number: 360-29918-1

Lab Section	Qualifier	Description
Metals		
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
General Chemistry		
	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

QUALITY CONTROL RESULTS

Client: Olin Corporation

Job Number: 360-29918-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
Metals					
Analysis Batch:360-62896					
LCS 360-62896/13	Lab Control Sample	T	Water	6010B	
LCSD 360-62896/26	Lab Control Sample Duplicate	T	Water	6010B	
MB 360-62896/14	Method Blank	T	Water	6010B	
360-29918-1	OC-GW 79S	D	Water	6010B	
360-29918-1DU	Duplicate	D	Water	6010B	
360-29918-1MS	Matrix Spike	D	Water	6010B	
360-29918-1SD	Serial Dilution	D	Water	6010B	
360-29918-2	OC-GW 202D	D	Water	6010B	
360-29918-3	OC-GW 202S	D	Water	6010B	
360-29918-4	OC-GW 202S DUP	D	Water	6010B	
360-29918-5	OC-PZ 18R	D	Water	6010B	
360-29918-6	OC-PZ 16RR	D	Water	6010B	
360-29918-7	OC-PZ 17RR	D	Water	6010B	
360-29918-8	OC-GW 78S	D	Water	6010B	
360-29918-9	OC-GW 25	D	Water	6010B	

Report Basis

D = Dissolved

T = Total

Client: Olin Corporation

Job Number: 360-29918-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 360-62759					
LCS 360-62759/2-A	Lab Control Sample	T	Water	Distill/Ammonia	
MB 360-62759/1-A	Method Blank	T	Water	Distill/Ammonia	
360-29918-1	OC-GW 79S	T	Water	Distill/Ammonia	
360-29918-2	OC-GW 202D	T	Water	Distill/Ammonia	
360-29918-3	OC-GW 202S	T	Water	Distill/Ammonia	
360-29918-4	OC-GW 202S DUP	T	Water	Distill/Ammonia	
360-29918-5	OC-PZ 18R	T	Water	Distill/Ammonia	
360-29918-6	OC-PZ 16RR	T	Water	Distill/Ammonia	
Prep Batch: 360-62783					
LCS 360-62783/2-A	Lab Control Sample	T	Water	Distill/Ammonia	
MB 360-62783/1-A	Method Blank	T	Water	Distill/Ammonia	
360-29918-7	OC-PZ 17RR	T	Water	Distill/Ammonia	
360-29918-7MS	Matrix Spike	T	Water	Distill/Ammonia	
360-29918-7MSD	Matrix Spike Duplicate	T	Water	Distill/Ammonia	
360-29918-8	OC-GW 78S	T	Water	Distill/Ammonia	
360-29918-9	OC-GW 25	T	Water	Distill/Ammonia	
Analysis Batch:360-62809					
LCS 360-62759/2-A	Lab Control Sample	T	Water	L107-06-1B	360-62759
MB 360-62759/1-A	Method Blank	T	Water	L107-06-1B	360-62759
360-29918-1	OC-GW 79S	T	Water	L107-06-1B	360-62759
360-29918-3	OC-GW 202S	T	Water	L107-06-1B	360-62759
360-29918-4	OC-GW 202S DUP	T	Water	L107-06-1B	360-62759
360-29918-5	OC-PZ 18R	T	Water	L107-06-1B	360-62759
360-29918-6	OC-PZ 16RR	T	Water	L107-06-1B	360-62759
Analysis Batch:360-62812					
LCS 360-62783/2-A	Lab Control Sample	T	Water	L107-06-1B	360-62783
MB 360-62783/1-A	Method Blank	T	Water	L107-06-1B	360-62783
360-29918-7	OC-PZ 17RR	T	Water	L107-06-1B	360-62783
360-29918-7MS	Matrix Spike	T	Water	L107-06-1B	360-62783
360-29918-7MSD	Matrix Spike Duplicate	T	Water	L107-06-1B	360-62783
360-29918-8	OC-GW 78S	T	Water	L107-06-1B	360-62783
Analysis Batch:360-62904					
LCS 360-62904/1	Lab Control Sample	T	Water	SM 2510B	
MB 360-62904/4	Method Blank	T	Water	SM 2510B	
360-29918-3	OC-GW 202S	T	Water	SM 2510B	
360-29918-4	OC-GW 202S DUP	T	Water	SM 2510B	
360-29918-5	OC-PZ 18R	T	Water	SM 2510B	
360-29918-7	OC-PZ 17RR	T	Water	SM 2510B	
360-29918-8	OC-GW 78S	T	Water	SM 2510B	
360-29918-9	OC-GW 25	T	Water	SM 2510B	

Client: Olin Corporation Job Number: 360-29918-1

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Analysis Batch:360-62942					
LCS 360-62942/3	Lab Control Sample	T	Water	SM 2510B	
MB 360-62942/2	Method Blank	T	Water	SM 2510B	
360-29918-1	OC-GW 79S	T	Water	SM 2510B	
360-29918-2	OC-GW 202D	T	Water	SM 2510B	
360-29918-6	OC-PZ 16RR	T	Water	SM 2510B	
Analysis Batch:360-63048					
360-29918-2	OC-GW 202D	T	Water	L107-06-1B	360-62759
Analysis Batch:360-63181					
LCS 360-63181/4	Lab Control Sample	T	Water	300.0	
MB 360-63181/3	Method Blank	T	Water	300.0	
360-29918-1	OC-GW 79S	T	Water	300.0	
360-29918-2	OC-GW 202D	T	Water	300.0	
Analysis Batch:360-63190					
LCS 360-63190/4	Lab Control Sample	T	Water	300.0	
MB 360-63190/3	Method Blank	T	Water	300.0	
360-29918-3	OC-GW 202S	T	Water	300.0	
360-29918-4	OC-GW 202S DUP	T	Water	300.0	
360-29918-5	OC-PZ 18R	T	Water	300.0	
360-29918-6	OC-PZ 16RR	T	Water	300.0	
360-29918-7	OC-PZ 17RR	T	Water	300.0	
360-29918-8	OC-GW 78S	T	Water	300.0	
360-29918-9	OC-GW 25	T	Water	300.0	
Analysis Batch:360-63326					
LCS 360-63326/4	Lab Control Sample	T	Water	300.0	
MB 360-63326/3	Method Blank	T	Water	300.0	
360-29918-2	OC-GW 202D	T	Water	300.0	
Analysis Batch:360-63430					
360-29918-9	OC-GW 25	T	Water	L107-06-1B	360-62783

Report Basis
T = Total

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-62896

Method: 6010B
Preparation: N/A

Lab Sample ID: MB 360-62896/14
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1052
Date Prepared: N/A

Analysis Batch: 360-62896
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian ICP
Lab File ID: 090810a.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	MDL	RL
Aluminum	ND		15	100
Chromium	ND		1.0	5.0

Lab Control Sample/
Lab Control Sample Duplicate Recovery Report - Batch: 360-62896

Method: 6010B
Preparation: N/A

LCS Lab Sample ID: LCS 360-62896/13
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1049
Date Prepared: N/A

Analysis Batch: 360-62896
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian ICP
Lab File ID: 090810a.csv
Initial Weight/Volume:
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 360-62896/26
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1142
Date Prepared: N/A

Analysis Batch: 360-62896
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian ICP
Lab File ID: 090810a.csv
Initial Weight/Volume:
Final Weight/Volume: 10 mL

Analyte	% Rec. LCS	% Rec. LCSD	Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
Aluminum	100	96	80 - 120	4	20		
Chromium	99	96	80 - 120	4	20		

Client: Olin Corporation

Job Number: 360-29918-1

Matrix Spike - Batch: 360-62896

Method: 6010B
Preparation: N/A

Lab Sample ID: 360-29918-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1131
Date Prepared: N/A

Analysis Batch: 360-62896
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian ICP
Lab File ID: 090810a.csv
Initial Weight/Volume:
Final Weight/Volume: 10 mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Aluminum	ND	5000	6040	121	75 - 125	
Chromium	23	1000	1130	110	75 - 125	

Duplicate - Batch: 360-62896

Method: 6010B
Preparation: N/A

Lab Sample ID: 360-29918-1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1134
Date Prepared: N/A

Analysis Batch: 360-62896
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian ICP
Lab File ID: 090810a.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Aluminum	ND	ND	NC	20	
Chromium	23	22.4	5	20	

Serial Dilution - Batch: 360-62896

Method: 6010B
Preparation: N/A

Lab Sample ID: 360-29918-1
Client Matrix: Water
Dilution: 5.0
Date Analyzed: 09/08/2010 1137
Date Prepared: N/A

Analysis Batch: 360-62896
Prep Batch: N/A
Units: ug/L

Instrument ID: Varian ICP
Lab File ID: 090810a.csv
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Sample Result/Qual	Result	%Diff	Limit	Qual
Aluminum	ND	ND	NC	10	
Chromium	23	24.4	NC	10	J

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-63181

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 360-63181/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1532
Date Prepared: N/A

Analysis Batch: 360-63181
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Sulfate	ND		2.0	2.0
Chloride	ND		1.0	1.0

Lab Control Sample - Batch: 360-63181

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 360-63181/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1547
Date Prepared: N/A

Analysis Batch: 360-63181
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	80.0	80.8	101	85 - 115	
Chloride	40.0	39.4	99	85 - 115	

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-63190

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 360-63190/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 2205
Date Prepared: N/A

Analysis Batch: 360-63190
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Sulfate	ND		2.0	2.0
Chloride	ND		1.0	1.0

Lab Control Sample - Batch: 360-63190

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 360-63190/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 2220
Date Prepared: N/A

Analysis Batch: 360-63190
Prep Batch: N/A
Units: mg/L

Instrument ID: Lachat
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	80.0	81.5	102	85 - 115	
Chloride	40.0	39.1	98	85 - 115	

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-63326

Method: 300.0
Preparation: N/A

Lab Sample ID: MB 360-63326/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/16/2010 1727
Date Prepared: N/A

Analysis Batch: 360-63326
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Sulfate	ND		2.0	2.0
Chloride	ND		1.0	1.0

Lab Control Sample - Batch: 360-63326

Method: 300.0
Preparation: N/A

Lab Sample ID: LCS 360-63326/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/16/2010 1742
Date Prepared: N/A

Analysis Batch: 360-63326
Prep Batch: N/A
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 1.0 mL
Final Weight/Volume: 10 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Sulfate	80.0	80.2	100	85 - 115	
Chloride	40.0	39.0	97	85 - 115	

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-62759

Method: L107-06-1B
Preparation: Distill/Ammonia

Lab Sample ID: MB 360-62759/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/03/2010 1407
Date Prepared: 09/02/2010 1500

Analysis Batch: 360-62809
Prep Batch: 360-62759
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Ammonia	ND		0.10	0.10

Lab Control Sample - Batch: 360-62759

Method: L107-06-1B
Preparation: Distill/Ammonia

Lab Sample ID: LCS 360-62759/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/03/2010 1408
Date Prepared: 09/02/2010 1500

Analysis Batch: 360-62809
Prep Batch: 360-62759
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ammonia	10.0	9.45	95	85 - 115	

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-62783

Method: L107-06-1B
Preparation: Distill/Ammonia

Lab Sample ID: MB 360-62783/1-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/03/2010 1431
Date Prepared: 09/03/2010 1039

Analysis Batch: 360-62812
Prep Batch: 360-62783
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL	RL
Ammonia	ND		0.10	0.10

Lab Control Sample - Batch: 360-62783

Method: L107-06-1B
Preparation: Distill/Ammonia

Lab Sample ID: LCS 360-62783/2-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/03/2010 1432
Date Prepared: 09/03/2010 1039

Analysis Batch: 360-62812
Prep Batch: 360-62783
Units: mg/L

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Ammonia	10.0	9.27	93	85 - 115	

Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 360-62783

Method: L107-06-1B
Preparation: Distill/Ammonia

MS Lab Sample ID: 360-29918-7
Client Matrix: Water
Dilution: 10
Date Analyzed: 09/03/2010 1500
Date Prepared: 09/03/2010 1039

Analysis Batch: 360-62812
Prep Batch: 360-62783

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 360-29918-7
Client Matrix: Water
Dilution: 10
Date Analyzed: 09/03/2010 1501
Date Prepared: 09/03/2010 1039

Analysis Batch: 360-62812
Prep Batch: 360-62783

Instrument ID: No Equipment Assigned
Lab File ID: N/A
Initial Weight/Volume: 50 mL
Final Weight/Volume: 50 mL

Analyte	% Rec. MS	% Rec. MSD	Limit	RPD	RPD Limit	MS Qual	MSD Qual
Ammonia	-29	-108	75 - 125	15	20	4	4

OK

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-62904

Method: SM 2510B
Preparation: N/A

Lab Sample ID: MB 360-62904/4
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1437
Date Prepared: N/A

Analysis Batch: 360-62904
Prep Batch: N/A
Units: umhos/cm

Instrument ID: Autotitrator
Lab File ID: 10090800.TXT
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Specific Conductance	ND		1.0	1.0

Lab Control Sample - Batch: 360-62904

Method: SM 2510B
Preparation: N/A

Lab Sample ID: LCS 360-62904/1
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1414
Date Prepared: N/A

Analysis Batch: 360-62904
Prep Batch: N/A
Units: umhos/cm

Instrument ID: Autotitrator
Lab File ID: 10090800.TXT
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Specific Conductance	1410	1390	98	85 - 115	

Client: Olin Corporation

Job Number: 360-29918-1

Method Blank - Batch: 360-62942

Method: SM 2510B
Preparation: N/A

Lab Sample ID: MB 360-62942/2
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1701
Date Prepared: N/A

Analysis Batch: 360-62942
Prep Batch: N/A
Units: umhos/cm

Instrument ID: Autotitrator
Lab File ID: 10090801.TXT
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Result	Qual	RL	RL
Specific Conductance	ND		1.0	1.0

Lab Control Sample - Batch: 360-62942

Method: SM 2510B
Preparation: N/A

Lab Sample ID: LCS 360-62942/3
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 09/08/2010 1702
Date Prepared: N/A

Analysis Batch: 360-62942
Prep Batch: N/A
Units: umhos/cm

Instrument ID: Autotitrator
Lab File ID: 10090801.TXT
Initial Weight/Volume:
Final Weight/Volume: 1.0 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Specific Conductance	1410	1390	99	85 - 115	

State Accreditation Matrix

Method Name	Description	State where Primary Accreditation is Carried				
		New Hampshire (NELAC) prim.	Mass	Conn	Florida (NELAC)	North Carolina
821-R-02-012	Toxicity, Acute (48-Hour)(list upon request)	NP			NP	
SM 4500 Cl F	Chlorine, Residual		NP			
SM 9215E	Heterotrophic Plate Count (SimPlate)		P			
SM 9222D	Coliforms, Fecal (Membrane Filter)		P/NP			
SM 9223	Coliforms, Total, and E.Coli (Colilert-P/A)		P			
SM 9224	Coliforms, Total, and E.Coli (Enumeration)		P			
1103.1	E.coli		ambient/ source			
Enterolert	Enterococcus					
200.8 Rev 5.4	Metals (ICP/MS) (list upon request)	NP/P	NP/P	NP/P		
200.7 Rev 4.4	Metals (ICP)(list upon request)	NP/P	NP/P	NP/P		
6010B	Metals (ICP)(list upon request)	NP/SW		NP/SW		
245.1	Mercury (CVAA)	NP/P	NP	NP/P		
7470A	Mercury (CVAA)	NP		NP		
7471A	Mercury (CVAA)	SW		SW		
SM 2340B	Total Hardness (as CaCO3) by calculation	NP/P	NP	NP/P		
3005A	Preparation, Total Recoverable or Dissolved Metals	NP/P		NP/P		
3010A	Preparation, Total Metals	NP/P		NP/P		
3020A	Preparation, Total Metals	NP/P/SW		NP/P/SW		
3050B	Preparation, Metals	SW		SW		
504.1	EDB, DBCP and 1,2,3-TCP (GC)	P	P	P		
608	Organochlorine Pest/PCBs (list upon request)	NP	NP	NP		
625	Semivolatile Org Comp (GC/MS)(list upon request)	NP		NP		
3546	Microwave Extraction	SW				
3510C	Liquid-Liquid Extraction (Separatory Funnel)	NP		NP		
3540C	Soxhlet Extraction	SW				
3550B	Ultrasonic Extraction	SW		SW		
600/4-81-045	Polychlorinated Biphenyls (PCBs) (GC)		NP	NP		
8081A	Organochlorine Pesticides (GC)(list upon request)	NP/SW		NP/SW		
8082A	PCBs by Gas Chromatography(list upon request)	NP/SW		NP/SW		
8270C	Semivolatile Comp.(GC/MS)(list upon request)	NP/SW		NP/SW		
CT ETPH	Conn - Ext. Total petroleum Hydrocarbons (GC)			NP/SW		
MA-EPH	Mass - Extractable Petroleum Hydrocarbons (GC)			NP/SW		NP/SW
524.2	Volatile Org Comp (GC/MS)(list upon request)	P	P	P		
524.2	Trihalomethane compounds	P	P	P		
624	Volatile Org Comp (GC/MS)(list upon request)	NP	NP	NP		
5035	Closed System Purge and Trap	SW		SW		
5030B	Purge and Trap	NP		NP		
8260B	Volatile Org Comp. (GC/MS)(list upon request)	NP/SW		NP/SW		
MAVPH	Mass - Volatile Petroleum Hydrocarbons (GC)			NP/SW		NP/SW
180.1	Turbidity, Nephelometric	P	P	P		
300	Anions, Ion Chromatography	NP/P	NP/P	NP/P		
410.4	COD	NP	NP	NP		
1010	Ignitability, Pensky-Martens Closed-Cup Method	SW		SW		
10-107-06-2	Nitrogen, Total Kjeldahl	NP	NP	NP		
7196A	Chromium, Hexavalent	NP/SW		NP/SW		
9012A	Cyanide, Total and/or Amenable	NP/SW		NP/SW		
9030B	Sulfide, Distillation (Acid Soluble and Insoluble)	NP		NP		
9040B	pH	NP		NP		
9045C	pH	SW		SW		
L107041C	Nitrogen, Nitrate	NP	P	NP/P		
L107-06-1B	Nitrogen Ammonia	NP	NP	NP/P		
L204001A CN	Cyanide, Total	P	NP/P	NP/P		
L210-001A	Phenolics, Total Recoverable	NP	NP	NP		
SM 2320B	Alkalinity	NP/P	NP/P	NP/P		
SM 2510B	Conductivity, Specific Conductance	NP/P	NP/P	NP/P		
SM 2540C	Solids, Total Dissolved (TDS)	NP/P	NP/P	NP/P		
SM 2540D	Solids, Total Suspended (TSS)	NP	NP	NP		
SM 3500 CR D	Chromium, Hexavalent	NP		NP		
SM 4500 H+ B	pH	NP/P	NP/P	NP/P		
SM 4500 NO2 B	Nitrogen, Nitrite	NP	P	NP/P		
SM 4500 P E	Phosphorus, Orthophosphate	NP/P	NP	NP/P		
SM 4500 P E	Phosphorus, Total	NP	NP	NP		
SM 4500 S2 D	Sulfide, Total	NP		NP		
SM 5210B	BOD, 5-Day	NP	NP	NP		
SM 5310B	Organic Carbon, Total (TOC)	NP/P	NP	NP/P		

Not all organic compounds are accreditied under NELAC
For methods with multiple compounds all compounds may not meet NELAC criteria, listing should be obtained from the laboratory
The lab carries additional accreditations with several states. This is the laboratories typcial listing but is subject to change based on the laboratories current certification standing.

Login Sample Receipt Check List

Client: Olin Corporation

Job Number: 360-29918-1

Login Number: 29918

List Source: TestAmerica Westfield

Creator: Beaumier, Janine E

List Number: 1

Question	T / F/ NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	False	9.0C
Cooler Temperature is recorded.	True	3.0C
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

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Chain of Custody Form

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●53 Southampton Road
Westfield, MA 01085
(P) 413-572-4000
(F) 413-572-3707
Westfield

●240 Bear Hill Rd., Suite 104
Waltham, MA 02451
(P) 781-466-6900
(F) 781-466-6901
Boston - Service Center

Client: olin Corporation
Address: 51 Eames st
wilmington MA 01887
Phone: 9786586121 Fax: Same

Client Project #:
Site ID & State:
Reports Sent To: steve Morrow/Brian Guichard
Email: beguichard@olin.com Email Rpt: ☐

Job#: 360-29918 Quote# PO#

Shaded areas for office use

Invoice same as Report to? ☐
If Invoice contact or address different, note in *Comments*

Comments
(Special Instructions)

Please print legibly. If the analytical requests are not clearly defined on the chain-of-custody, the turnaround time will begin after all questions have been satisfactorily answered.

Requested Turnaround Time (PLEASE SPECIFY)
STANDARD ______ RUSH ______
(Lab Approval Required)

Regulatory Programs/Presumptive Certainty/QC Forms
MADEP MCP ☐ GW1/S1 ☐ PWS DEP Forms ☐
CTDEP RCP ☐ CT RSR ☐ EDD Required ☐
Std Rpt (L1) ☐ Rpt + QC(L2./MCP ☐ CLP Rpt (L3 or L4) ☐

500-series for drinking water
600-series for wastewater, NPDES
6000-series for groundwater, soil, waste
8000-series for groundwater, soil, waste
Use comments section to further define.

Sample Type Codes: WW-Wastewater, DW-Drinking Water, SW-Surface Water, GW-Groundwater, LW Lab Water, A-Air, S-Solids/Soil O-Oil, "Z"- Other

Sample I.D.	Sample Type	Sampler's Initials	Date Time Collected	pH ✓ (lab use only)	Grab	Comp.	# Containers	Plastic(P) or Glass(G)	NaHSO4/MeOH	HNO3 to pH <2	H2SO4 to pH <2	HCl to pH <2	NaOH to pH >12	Na2S2O3	None / 4° C	524 / 624 / 8260	525 / 625 / 8270	PCB / Pest / Herbicide	EPH / VPH	DRO / GRO / ETPH	Metals (Please Specify)	Mercury	General Chemistry	Bacteriological	Toxicity	Diss Al/Cr 6010B	Specific Cond	chloride Sulfate	Ammonia-nitrogen
GW79S	GW	BG	8/30/10 135		X		3	P		1	1				1											X	X	X	X
GW202D	GW	BG	8/31/10 905		X		3	P		1	1				1											X	X	X	X
GW 202S	GW	BG	8/31/10 9:55		X		3	P		1	1				1											X	X	X	X
GW	GW	BG	8/31/10		X		3	P		1	1				1											X	X	X	X
GW202S DUP	GW	BG	8/31/10 10:00		X		3	P		1	1				1											X	X	X	X
PZ18R	GW	BG	8/31/10 11:30		X		3	P		1	1				1											X	X	X	X
PZ16RR	GW	BG	8/31/10		X		3	P		1	1				1											X	X	X	X
PZ17RR	GW	BG	9/1/10 10:00		X		3	P		1	1				1											X	X	X	X
GW78S	GW	BG	9/1/10 11:35		X		3	P		1	1				1											X	X	X	X
GW 2S	GW	BG	9/1/10 8:45		X		3	P		1	1				1											X	X	X	X

Sampled by (print): BRIAN Guichard
Signature: [signature]

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	9/1/10	3:00	[signature]	9-1-10	1505
[signature]	9-1-10	1700	[signature]	9/1/10	14:00

Cooler? (Y) N
MADEP Requirement Samples Iced? (Y) N
Temp @ receipt: 3.0/9.0 °C
Preservation / pH checked? (Y) N
By: JB Date: 9/1/10

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Page 1 of 2

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●53 Southampton Road, Westfield, MA 01085, (P) 413-572-4000, (F) 413-572-3707, Westfield
●240 Bear Hill Rd., Suite 104, Waltham, MA 02451, (P) 781-466-6900, (F) 781-466-6901, Boston - Service Center

Client: olin Corporation
Address: 51 eames st, wilmington MA 01887
Phone: 9786586121 Fax: None

Client Project #:
Site ID & State:
Reports Sent To: steve morrow / Brian Guichard
Email: beguichard@olin.com Email Rpt: ☐

Job#: 360-29918 Quote#: PO#:
Shaded areas for office use
Invoice same as Report to? ☐
If Invoice contact or address different, note in Comments

Comments (Special Instructions)
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GW 16	GW	BG	9/1/10 705				11	P/G		1		7			3	X										X	X	X 8270C NDMA/BEHP; X VPH(MAVPH); X PH by SM4500 H+B

JB 9/1/10

Sampled by (print): Brian Guichard
Signature: [signature]

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	9/1/10	3:00	[signature]	9-1-10	1505
[signature]	9-1-10	1700	[signature]	9/1/10	17:00

Cooler? (Y) N
MADEP Requirement Samples Iced? (Y) N
Temp @ receipt: 3.0/9.0 °C
Preservation / pH checked? (Y) N
By: JB Date: 9/1/10

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Page 2 of 2

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